PATENT
Customer No. 22,852
Attorney Docket No. 05725.1018-00000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	
Xavier BLIN et al.	Group Art Unit: 1615
Application No.: 10/046,568	Examiner: Jyothsna A. VENKAT
Filed: January 16, 2002	
For: NAIL POLISH COMPOSITION COMPRISING A POLYMER	Confirmation No.: 1780

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

DECLARATION UNDER 37 C.F.R. § 1.132

I, Stacy STERPHONE, do hereby make the following declaration:

1. I have a Bachelor's degree in Biology from Seton Hill College and a Master's degree in Cosmetic Science from Fairleigh Dickinson University.

2. I have more than fourteen (14) years experience in cosmetic formulations, including more than six (6) years experience with mascara formulations.

3. I am currently employed as the Manager of the Powder Lab of L'Oréal U.S.A. in Clark, New Jersey.

4. I have reviewed the specification of U.S. Patent Application No. 10/046,568, filed January 16, 2002. I believe that I am a person skilled in the art with respect to the subject matter disclosed in this application.

5. I have reviewed claims 98 and 106-121 as set forth in the Reply to Office Action that I understand will be filed concurrently with this declaration. In addition, I have reviewed the Office Action dated September 22, 2004 ("Office Action").

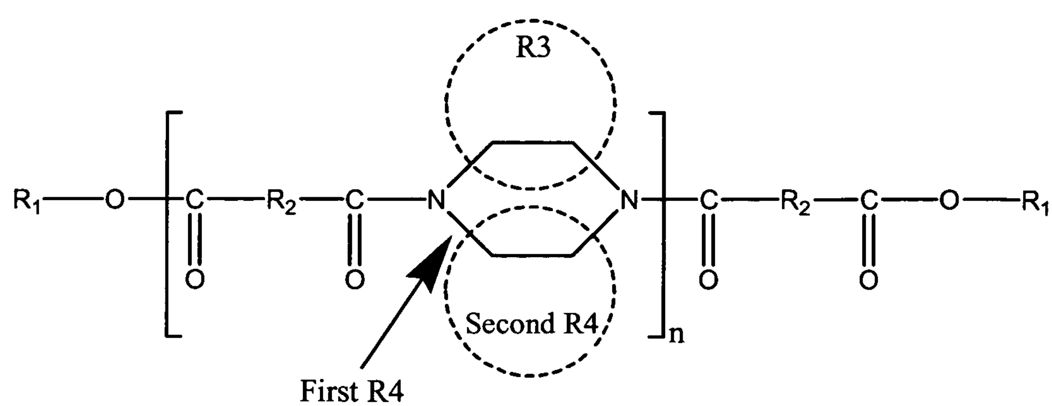
5a. It has been explained to me that the Patent Office has rejected claims 98 and 106-120 of the application for non-compliance with the written description requirement of 35 U.S.C. § 112, first paragraph. Specifically, the Office Action states that "[t]here is no description in the specification for [the] heterocyclic ring systems" of R^4 and that "[t]he same is true for the definition of R3 when it is defined as 'when R3 are identical or different and chosen from organic groups comprising atoms chosen from carbon atoms, hydrogen atoms, oxygen atoms and nitrogen atoms.'" Office Action at pages 2-3. I do not agree.

6. I have reviewed line 20 on page 9 to line 24 on page 11 of the original application discussing embodiments of the inventive composition in which the at least one heteropolymer is at least one polyamide polymer of formula (I). This section clearly defines the variables R^3 and R^4 of formula (I). I also note that lines 20-21 on page 9 call specific attention to U.S. Patent No. 5,783,657 ("the '657 patent") for when the at least one heteropolymer is at least one polyamide polymer of formula (I). I am familiar with the '657 patent and found that it discusses R^3 and R^4 groups possible within formula (I) in at least column 6, line 9 to column 7, line 14. The '657 patent references the R^4 groups of this application as R^{3a} groups.

7. Lines 13-19 on page 10 of the application define R^4 as follows: "R^4 independently represents, in each case, a hydrogen atom, a C_1 to C_{10} alkyl group or a direct bond to R^3 or to another R^4, so that the nitrogen atom to which both R^3 and R^4 are

bonded forms part of a heterocyclic structure defined by R^4-N-R^3, with at least 50% of the R^4 groups representing a hydrogen atom." By this definition, I understand that a particular R^4 may be either a hydrogen atom, a C_1 to C_{10} alkyl group, or a direct bond that forms part of a heterocyclic structure.

7a. I know a heterocycle to be a chemical ring structure in which one or more of the atoms in the ring are not carbon atoms, i.e., heteroatoms. *See* Introduction to Organic Chemistry, third edition, page 998 (attached as Appendix A). From the definition of R^4 at lines 13-19 on page 10 of the application, I see that when R^4 is a direct bond to another R^4, the nitrogen atom to which both R^3 and R^4 are bonded can form part of a heterocyclic structure. For instance, when R^3 is an organic group comprising two carbon atoms (as described at lines 10-12 on page 10 of the application), the first R^4 in formula I is a direct bond to the second R^4, and the second R^4 is a C_2 alkyl group (falling within the description at line 15 on page 10 of the application), the following exemplary heterocyclic structure within formula (I) would be formed:



This example clearly shows a heterocyclic structure defined in part by first R^4-N-R^3, which I note is called a piperazine ring in the '657 patent at column 7, lines 3-10. Thus,

based on my experience and knowledge, when reading the description of R^4 in the application I readily understand a heterocyclic structure to be possible for R^4-N-R^3, such as in the example described above.

7b. Moreover, lines 14-19 on page 10 of the application limit the various possible R^4 groups to one of three choices: a hydrogen atom, a C_1 to C_{10} alkyl group, or a direct bond that forms part of a heterocyclic structure. As a result, this definition also limits the number of possible heterocyclic structures. Since one R^4 that is a direct bond cannot form such a direct bond to a second R^4 that is a hydrogen atom (as a hydrogen atom can only form one bond), an R^4 can only be a direct bond to another R^4 when that other R^4 is a C_1 to C_{10} alkyl group.

7c. Further, in conjunction with the present application, and particularly lines 14-19 on page 10, in view of the reference to the '657 patent at lines 20-21 on page 9 of the application, I would also consider the description presented in the '657 patent, and in particular column 7, lines 3 to 13, to understand further kinds of heterocyclic structures that may be possible with the R^4 groups of the claimed invention.

7d. Based on my experience and knowledge, when reading the application I readily understand the characteristics of the R^4 groups discussed in paragraphs 7b and 7c, above, as shown by the example of paragraph 7a. Moreover, I understand the types and compositions of heterocyclic structures possible for the claimed invention from the descriptions of R^4 groups presented in the application. Also as discussed in paragraphs 7a to 7c, above, I understand the claimed recitation of the R^4 group to limit the number of possible heterocyclic structures to those types and compositions.

8. Lines 10-13 on page 10 of the application define R^3 as follows: "R^3 independently represents, in each case, an organic group provided with at least 2 carbon atoms, with hydrogen atoms and optionally with one or more oxygen or nitrogen atoms." Lines 11-14 on page 11 further state: "Preferably, R^3 represents a C_2 to C_{36} hydrocarbonaceous group or a polyoxyalkylenated group," or a "C_2 to C_{12} hydrocarbonaceous group." Lines 15-16 on page 11 state that "hydrocarbonaceous groups can be linear, cyclic or branched and saturated or unsaturated groups."

8a. I understand from the description of R^3 in the application that R^3 is an organic group with a combination of carbon atoms and hydrogen atoms that may optionally have nitrogen atoms and/or oxygen atoms, wherein the organic group comprises at least 2 carbon atoms. Further, I understand both polyoxyalkylenated and hydrocarbonaceous groups to fall within R^3, as I know polyoxyalkylenated groups comprise alternating alkylene groups and oxygen atoms, and hydrocarbonaceous groups comprise carbon atoms and hydrogen atoms.

8b. In addition, as above with respect to R^4, in order to understand further kinds of organic, hydrocarbonaceous, and/or polyoxyalkylenated groups that may be possible for the R^3 groups of the claimed invention, beyond those presented in the above-noted and discussed sections of the application, I would also read the descriptions presented in at least column 6, line 9 to column 7, line 14 of the '657 patent in view of the reference to that patent at lines 20-21 on page 9 of the application.

8c. Based on my experience and knowledge, when reading the application I readily understand the types and compositions of R^3 groups possible in the claimed invention from the descriptions of R^3 groups presented in the application. As such, I

also understand the claimed recitation of the R^3 group to define adequately the types and compositions of possible structures.

9. I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that the statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Dated: March 1, 2005

By: Stacy Sterphone
Stacy Sterphone

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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APPENDIX A

THIRD EDITION

Introduction to Organic Chemistry

Andrew Streitwieser, Jr.
Clayton H. Heathcock
UNIVERSITY OF CALIFORNIA, BERKELEY

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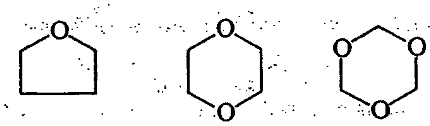
Chapter 31
Heterocyclic Compounds

31.1 Introduction

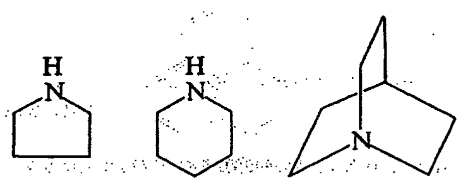
Heterocycles are cyclic compounds in which one or more ring atoms are not carbon (that is, **heteroatoms**). Although heterocyclic compounds are known that incorporate many different elements into cyclic structures (for example, N, O, S, B, Al, Si, P, Sn, As, Cu), we shall consider only some of the more common systems in which the heteroatom is N, O, or S.

Heterocycles are conveniently grouped into two classes, nonaromatic and aromatic. The nonaromatic compounds have physical and chemical properties that are typical of the particular heteroatom. Thus, tetrahydrofuran and 1,4-dioxane are typical ethers, while 1,3,5-trioxane behaves as an acetal.



tetrahydrofuran 1,4-dioxane 1,3,5-trioxane

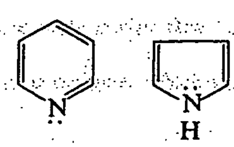
Pyrrolidine and piperidine are typical secondary amines and the bicyclic compound quinuclidine is a tertiary amine.



pyrrolidine piperidine quinuclidine

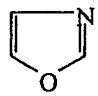
Since the chemistry of these compounds parallels the chemistry of their acyclic relatives, we shall treat them here only briefly.

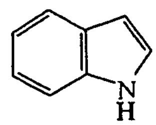
The aromatic heterocycles include such compounds as pyridine, where nitrogen replaces one of the CH groups in benzene, and pyrrole, in which the aromatic sextet is supplied by the four electrons of the two double bonds and the lone pair on nitrogen.

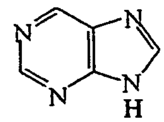


pyridine pyrrole

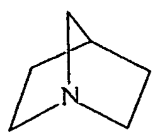
Other aromatic heterocycles contain more than one heteroatom, and still others contain fused aromatic rings. Examples that we will treat in more detail later include oxazole, indole, and purine.

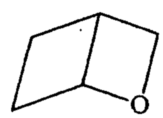

oxazole


indole

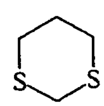

purine

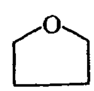
The nomenclature of these heterocyclic series is a vast sea of special names for individual ring systems and trivial names for individual compounds. In the course of developing the chemistry of some important groups of compounds we will treat the associated nomenclature. There is only one naming scheme common to all of these compounds, and it, unfortunately, is used only in cases where alternative nomenclature based on special names is awkward. This scheme is based on the corresponding hydrocarbon. The compound formed by replacing a carbon by a heteroatom is named by an appropriate prefix: **aza** for nitrogen, **oxa** for oxygen, and **thia** for sulfur. For example, the following heterocycles are considered as derivatives of bicyclo[2.2.1]heptane and bicyclo[2.2.0]hexane, respectively.

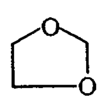

1-azabicyclo[2.2.1]heptane


2-oxabicyclo[2.2.0]hexane

For saturated, monocyclic heterocycles not containing nitrogen the ring size is designated by a suffix. For three-membered heterocycles the suffix is **-irane**; for four-membered compounds it is **-etane**; for five-membered materials **-olane**; and for six-membered heterocycles the suffix is **-ane**. It should be remembered that this system is not used with nitrogen-containing rings. In addition, most of the simple heterocycles have common names that are in such general use that the systematic names are rarely used. Some examples of this nomenclature are as follows.


1,3-dithiane
(used commonly)


oxolane
(rarely used)

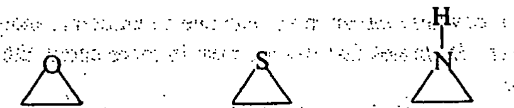

1,3-dioxolane
(used commonly)

The commonly used names for monocyclic rings with a single heteroatom will be discussed in the next section.

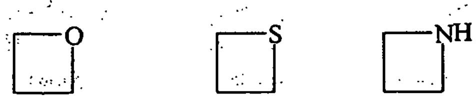
31.2 Nonaromatic Heterocycles

A. Nomenclature

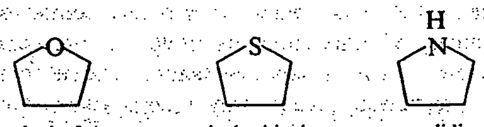
Names in common use of some fully saturated heterocycles containing only one heteroatom are shown below.



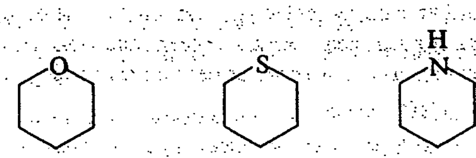
oxirane (ethylene oxide) | thiirane (ethylene sulfide) | aziridine (ethyleneimine)



oxetane | thietane | azetidine

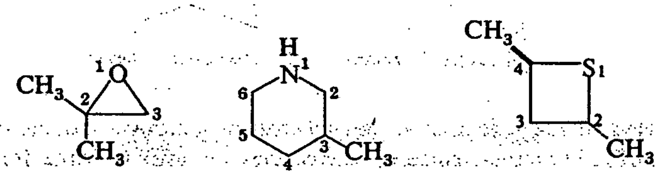


tetrahydrofuran | tetrahydrothiophene | pyrrolidine



tetrahydropyran | tetrahydrothiopyran | piperidine

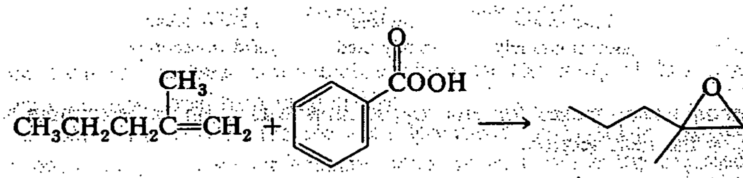
In naming substituted derivatives, the ring is numbered beginning with the heteroatom.



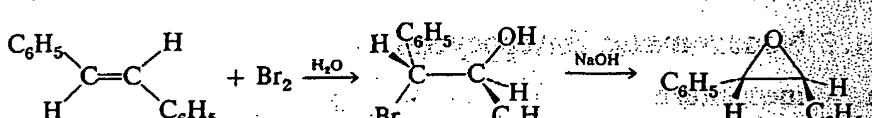
2,2-dimethyloxirane | 3-methylpiperidine | *trans*-2,4-dimethylthietane

B. Three-Membered Rings

Oxiranes have been discussed previously (Sections 10.11.A and 11.6.E.). Recall that the two most general syntheses are the oxidation of alkenes with peroxyacids and the base-catalyzed cyclization of halohydrins (page 258).



2-methyl-2-propyloxirane



trans-2,3-diphenyloxirane